

# Solar Powered Well Pump Solutions

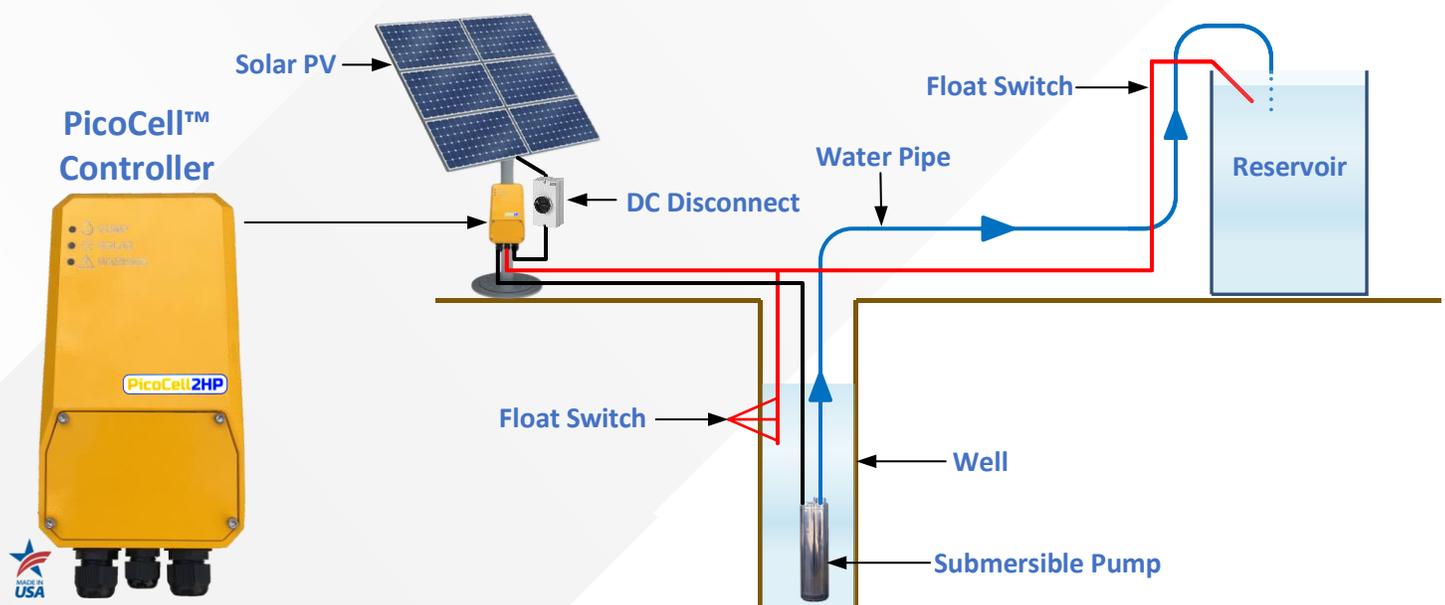
## PRODUCT HIGHLIGHTS

- Run any installed or new AC pump with free solar power, up to 2 HP
- Affordable solar investment sized for your well
- Small sized box, simple hook up, weather proof, durable and automatic
- One universal controller powers AC pumps up to 2HP, 1/3 phase, 115V/230V, 50/60Hz
- AC pumps offer similar head and flow vs DC pumps at significantly lower cost
- Changes a 1 or 2 speed motor/pump into a soft start, VFD (variable frequency drive)
- VFD will run motors even at lower solar output extending the useful pumping time
- Optional float switch turns off pump when well is dry or tank is full
- Maximizes solar panel efficiency allowing fewer panels to supply the needed power
- Also works with battery bank, genset or electricity grid backup
- Service up to 350ft head and high flow pumps of 10,000 - 28,000gpd

## DESCRIPTION

SunTech's well pumping kits include everything you need to install a fully solar powered well pump. Kits are available for a variety of flow rates and well depths (head). Custom flow and head combinations are available upon request, including surface pump options.

One small PicoCell device now integrates the functions of an inverter, VFD, MPPT controller, and voltage boost with automatic control. Kits include full complement of solar panels, racking, cabling, clips, DC power disconnect, mounting panel and PicoCell™ controller. Solar arrays and racking are sized appropriately for each pump.



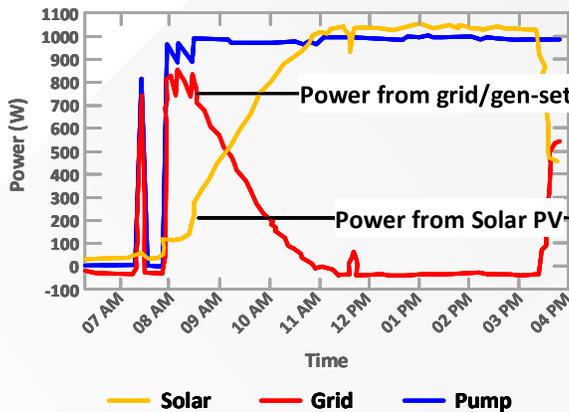
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# Intelligent Power Blending with PicoPanel

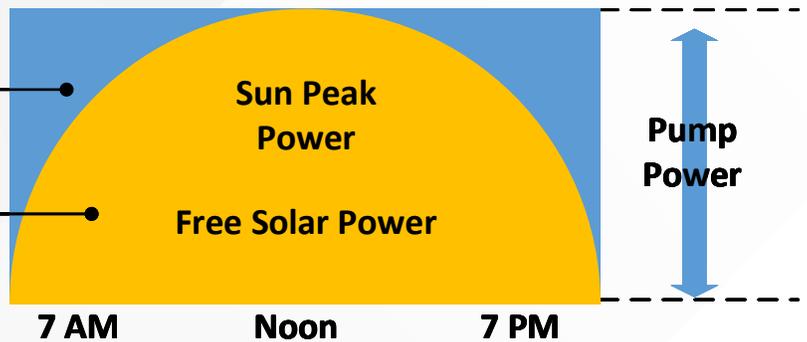
**MAINTAINS FULL POWER 24/7 WHILE MINIMIZING POWER COST**

- Maximize solar energy use and use electricity at night or when cloudy
- Seamlessly blends energy between your solar array and the power grid
- No circuit panel installation required, plugs in as simple outlet load
- Universal controller – single/three phase, 50/60Hz, 115Vac/230Vac
- Simple installation and intelligent operation

**Field validation:**



**Conceptual:**



PicoCell with optional Power Blending seamlessly blends energy between a solar array and the power grid. It is ideally suited for applications that require 24/7 or some night time operation, particularly in areas with high power costs. The combination of the PicoCell controller and the optional Power Blending Controller™ represents a cost effective way to intelligently supplement solar power with controllable night time operation, without the expense of adding batteries.



During time of full solar irradiance, the PicoCell and Power Blending Controller will draw maximum power from the PV array. As cloud cover or impending darkness reduce the level of solar irradiance, the system automatically makes up the difference by drawing from the grid. As darkness descends, the system can draw all of its power from the grid. In high energy cost areas this allows for both power firming during the day and full nighttime operation while consuming as little power from the grid as possible.

# Typical System Configuration



Well pumping with elevated storage tank



Off grid cabin well pumping



Remote livestock watering



Remote livestock watering

# Submersible Pump Solutions

- Low flow/high head configurations are ideal for deep wells and high pressure applications.
- High flow/low head configurations are ideal for wells that are up to 110 ft deep.

**Custom flow and head combinations are available upon request.**

## SOLAR PUMP KIT: LOW FLOW/HIGH HEAD 4 INCH WELL BORE

	ITEM #	FOR WELLS UP TO:	FLOW RATE OF:	PANEL RACK	# OF PANELS INCLUDED
<b>Configuration 1</b>	501-0500	200 feet	7 gpm	Top of Pole	6-8 PV panels*
<b>Configuration 2</b>	501-0504	200 feet	7 gpm	Ground Mount	6-8 PV panels*
<b>Configuration 3</b>	501-0501	350 feet	8 gpm	Top of Pole	8-10 PV panels*
<b>Configuration 4</b>	501-0505	350 feet	8 gpm	Ground Mount	8-10 PV panels*

## SOLAR PUMP KIT: HIGH FLOW/LOW HEAD 4 INCH WELL BORE

	ITEM #	FOR WELLS UP TO:	FLOW RATE OF:	PANEL RACK	# OF PANELS INCLUDED
<b>Configuration 5</b>	501-0502	60 feet	25 gpm	Top of Pole	6-8 PV panels*
<b>Configuration 6</b>	501-0506	60 feet	25 gpm	Ground Mount	6-8 PV panels*
<b>Configuration 7</b>	501-0503	110 feet	25 gpm	Top of Pole	8-10 PV panels*
<b>Configuration 8</b>	501-0507	110 feet	25 gpm	Ground Mount	8-10 PV panels*

- Kits Include:**
- ✓ Pre-configured PicoPanel with PicoCell controller & SolProtect DC disconnect
  - ✓ PV panels\*
  - ✓ Submersible pump
  - ✓ Jumper cables
  - ✓ Grounding clips

**Not included in kits:** water pipe, power cord to pump, water tank, float switch, PV mounting post, concrete ballast, or shipping.

**PicoCell and pumps also available for sale without solar kit**

*\* Supply of PV panels subject to change. Typical panels are 60-cell/250-280W or 72-cell/290-330W Power Blending options, and SolProtect GFD/GFCI Disconnect options available upon request.*